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Practice: For use after Lesson 3.7, Algebra 2 with Trigonometry

Algebra 2 GHP
Unit #8
WS #8

Parallel and Perpendicular Lines

Determine if the lines passing through the given pairs of points are parallel, perpendicular, or neither.

1. $(1, 2), (2, 4)$ and $(2, 4), (4, 8)$ _____

2. $(4, 1), (5, 4)$ and $(4, 3), (7, 2)$ _____

3. $(3, -5), (-2, -2)$ and $(1, -4), (2, -5)$ _____

Write an equation of the line parallel to the given line and with the given y-intercept.

4. $y = 2x - 5, b = -1$ _____

5. $y = 3x + 2, b = 4$ _____

6. $3y = 6x - 9, b = 5$ _____

7. $2y = -8x + 6, b = 1$ _____

Write an equation of the line perpendicular to the given line and with the given y-intercept.

8. $y = 2x - 2, b = 3$ _____

9. $y = -3x + 1, b = 5$ _____

10. $2y = -x + 4, b = -1$ _____

11. $4y = 3x - 4, b = -2$ _____

Determine if the given lines are parallel, perpendicular, or neither.

12. $2y = x - 4, 4y = 2x + 8$ _____

13. $4y = x, 8y = -2x - 8$ _____

Application

14. **Geometry** Show that the triangle whose vertices have coordinates $(-1, -2), (3, 5)$, and $(5, 1)$ is a right triangle.

MIXED PRACTICE

Find the slope of the line passing through the given points.

15. $(1, 4), (-2, 7)$ _____

16. $(-4, 1), (-4, -1)$ _____

Write an equation of the line parallel to the given line and with the given y-intercept.

17. $y = -x + 8, b = -3$ _____

18. $5y = 3x - 10, b = 4$ _____